Financial Inclusion: Understanding Concept, Barriers and Measurement

Rashmi Arora

University of Bradford, UK

1. Introduction

A large number of studies have examined the link between financial development and economic growth and have observed a positive relationship between the two (King and Levine 1993; Levine 1997; Demirguc-Kunt and Levine 2008; Greenwood and Jovanovic 1990; Bencivenga and Smith 1991). A number of empirical studies also observed positive relationship between finance and economic growth. King and Levine (1993a, 1993b) and Gregorio and Guidotti (1995) showed that higher levels of financial development are positively associated with faster rates of economic growth. However, it has been realized in the recent years, especially since the crisis, that financial sector development could be leading to uneven growth and contributing to income inequality as access to finance may be unequal among people, regions and income levels (Arora 2012a). A number of studies have also examined how lack of finance can lead to inequality (Claessens and Perotti, 2005, 2007; Demirguc-Kunt and Levine, 2009).

Financial access is gradually being recognised as a significant aspect of economic development. It enables people to invest in business, education and their health, increases consumption and overall wellbeing. It is considered as a critical factor in job creation and promotion of economic growth. In recent years it has gained increasing importance as it has been realised as a tool of reducing extreme poverty and promoting sustainable and inclusive development. The UN Sustainable Development Goals recommend to "strengthen productive capacity by providing universal access to financial services and infrastructure such as transportation and ICT' to achieve Goal 8 of creating jobs, sustainable livelihoods and equitable growth" (see UN 2013). It has been identified as an enabler for 7 of the 17 Sustainable Development Goals.

Financial inclusion also remains high up on the agenda of G-20 countries by endorsing the G20 High-Level Principles for Digital Financial Inclusion. World Bank also considers financial inclusion as a key factor in reducing extreme poverty and has a goal of reaching Universal Financial Access by 2020. Despite the strong policy support, however, large gaps remain in building an inclusive financial system.

Formal financial inclusion besides achieving the development objectives, also leads to increased transparency in financial transactions which in turn assists enforcement agencies in dealing with money laundering and terrorist financing (De Koker and Jentzsch 2012). Inclusive financial systems have become a major priority goal for the developing countries, yet a challenge remains to develop the financial sector without undermining financial stability (Park 2013).

The most recent data available on financial inclusion from the findings of the 2014 World Bank Global Findex Database shows that in 2014, 62% of adult population has bank accounts increasing from 51% in 2011.[1] The number of people with accounts at financial institutions grew by 700 million between 2011 and 2014. At the same time, the number of unbanked adults declined from 2.5 billion to 2 billion in 2014.

Despite this, around 2 million people still remain unbanked globally. Among the unbanked, South Asia, East Asia and Pacific nations comprise more than 50% of the unbanked adults of which South Asia accounts for more than 31 percent. The gender gap is also high with the number of women with financial inclusion still lower compared to men. Moreover, financial inclusion not only varies across the countries, but considerable variations exist even within the countries (World Bank 2014).

This chapter examines the conceptual and measurement issues involving financial inclusion. Rest of the chapter is organised as follows. Section 2 defines the concept of financial inclusion. Section 3 briefly discusses the barriers to financial inclusion. The next section outlines measurement issues and data sources involving financial inclusion. Finally, the last section of the study concludes.

2. Financial Inclusion: Definition[2]

[1] The two databases 2011 and 2014 are not strictly comparable to each other. While data for 2011 includes only accounts at financial institutions, 2014 data covers both mobile money accounts and accounts at financial institutions.

[2] In the literature and policy circles financial inclusion usually refers to the formal banking system. However, the poor and those excluded may still have access to finance through informal financial sector and non-banking financial institutions. In some countries such as Sub-Saharan Africa region the two sectors have coexisted and increase in formal sector has not led to reduction in the size of the informal sector (Aryeetey 2008). The discussion in this chapter is focused on the formal financial system.

There is no single universally accepted definition of financial inclusion. Most definitions consider three dimensions: access, use and quality (Beck et al., 2007; Demirgüç-Kunt and Klapper, 2012; Allen et al., 2012; World Bank, 2014; BIS, 2015; Demirgüç-Kunt et al., 2015; and Sahay et al, 2015). Access indicates depth of the outreach of financial services, usage measures how people use financial services and quality reflects the usefulness of product matching with customers' need. As Sahay et al. (2015) state, "The idea is that finance should be available to as many as possible for a variety of uses: accounts to receive income or transfers, savings accounts to store money safely and prudently, credit sources for personal or business borrowings, and insurance products to tide against bad times." According to Hannig and Jensen (2010) "Financial inclusion aims at drawing the "unbanked" population into the formal financial system so that they have the opportunity to access financial services ranging from savings, payments, and transfers to credit and insurance."

Some studies distinguish between access to finance and financial inclusion. World Bank in its Global Financial Development Report for 2014 defined financial inclusion as "the proportion of individuals and firms that use financial services." The Report further adds that, "it has a multitude of dimensions, reflecting the variety of possible financial services, from payments and savings accounts to credit, insurance, pensions, and securities markets." This, according to World Bank is different from access to finance as it may include people who may have access but do not want to use financial services.

In recent years, conceptually financial inclusion has broadened to incorporate financial capability and financial citizenship. The term financial capability refers to the ability of people to take informed financial decisions and develop "financially responsible and financially independent citizens" (Appleyard 2011). The concept is more applicable in the case of developed countries where literacy levels and awareness is much higher. Financial literacy (and literacy in general) hence is a vital input in building financial capabilities. Financial citizenship conceptually is placed at an even higher level and encompasses both financial inclusion and financial capability. According to Appleyard (2011) it "emphasise (s) the relational nature of finance between financial markets, financial institutions and their clients and the need for a greater financially inclusive landscape." In a supply oriented approach, it places the responsibility of enhancing financial inclusion on the financial institutions and considers access to financial services as entitlements (Berry and Serra 2012).

Arora (2012b) too argued that supply-centric approach presumes that the supply of financial services would in itself lead to a financially inclusive development.

The idea of financial citizenship however, appears to be far-fetched in the context of developing countries where financial exclusion often comes along with other deprivations of health, education, absence of drinking water facilities and infrastructure (Peachy & Rae 2004). Other studies also argue that financial exclusion is exclusion not only from physical access to financial services, but could include other barriers to financial inclusion as well (Ford and Rowlingson, 1996; Kempson and Whyley, 1998). For instance, Kempson and Whyley (1998) argue that while there is a need for financial services, there could exist other exclusions as well for instance lack of jobs, housing etc. This implies that increasing the supply of financial services may not lead to higher financial inclusion if the roots of the problem lie elsewhere. As understanding barriers is crucial to the measurement of financial inclusion, we briefly discuss some of the barriers to financial inclusion.

3. Barriers to Financial Access

Among the major barriers are gender for example, many women in the developing countries face barriers in accessing finance due to lack of mobility, low human capital and low voice in the family. Similar barriers exist even in the developed countries such as in the case of UK, Kwong et al. (2012) found that potential women entrepreneurs in UK perceive financial barriers. Even when no other barriers exist, perceived gender barriers itself plays a role in preventing potential female entrepreneurs. The authors also found that education also played a role in low perception of the potential borrowers. Johnson (2004) also observed gendered norms in demand for access to financial services.

Using enterprise surveys to assess whether female owned enterprises are less likely to use formal financial services than men in the case of Sub-Saharan Africa, Aterido, Beck and Iacovone (2013) also explored reasons for their not accessing formal system compared to men. They found that women entrepreneurs use less formal financial services than men (although this gap disappears when controlling for other variables). According to them, the factors which may affect female headed enterprises are age, lesser probability of exporting and foreign ownership participation which could lead to lower access to finance. Women enterprises are, therefore, more likely to use informal financial services. Demirguc Kunt, Klapper and Singer (2013) found that legal discrimination against women and gender norms also explain low access to finance by women.

Barriers to access also may be faced by less privileged people such as disabled population which may face issues as poor accessibility to bank branch, distance to branch or ATM, unhelpful attitude of bank officers. Other vulnerable population groups such as low caste population as in the Indian case, agricultural and short-term migrants and elderly population may also face barriers to access.

Martinez, Hidalgo and Tuesta (2013) using probit models examined the demand barriers to financial access in Mexico. They consider variables such as gender, age, household characteristics, education, occupation, savings and remittances, capacity to deal with external shocks, income and geographical factors such as size of the town, its location and characteristics. The results of their study showed that income is the main barrier to demand for financial services as 77% of the financially excluded cited income as the main factor. Other studies too found lack of income as one of the prominent reason for not using formal financial services (Allen et al.2012; Martinez et al.2013; Djankov et al. 2008; Kedir 2003). The studies have found positive relationship between higher incomes and financial inclusion. Rather low incomes have rendered a large number of bank accounts dormant and unused in a number of developing countries. Globally this forms around 15 per cent of adults with accounts at financial institution. The dormancy rate is especially high in South Asia at 42 percent (Demirguc-Kunt et al. 2015).

Martinez, Hidalgo and Tuesta (2013) observed that self-exclusion from the formal financial services is also high at 47% reflecting preference for informal market including family and friends. De Koker and Jentzsch (2012) also argued that access to formal financial services may not necessarily imply reduction in the usage of informal financial services. Their study collected data from different household surveys on use of formal and informal financial services in eight African countries and showed that access to formal financial services such as holding bank account is positively related to the use of informal services. Comparing the incentives to use formal and informal financial services, De Koker and Jentzsch (2012) note that trust, informal eligibility and opportunities for social interaction remain as incentives for informal sector whereas lower interest rates, product design and trust were the incentives of using formal financial system.

Personal reasons such as barriers of mistrust, fear of being rejected, fear of high indebtedness and preference for informal savings are some of the personal barriers. Lack of trust in the financial system, fear of bank failure or fraud can also hold some people from using financial services (Dittus & Klein 2011). Education as a demand barrier in financial inclusion has also been considered by several studies. Poor education levels and illiteracy may prevent large number of people from accessing financial services.

More than above perhaps, some of the deeper barriers relating to financial access are poverty, vulnerability of poor, their low voice in the community and difficulty in accessing bank branch officers. The latter constraint could be especially crucial for the poor and illiterate people in navigating through the complexities of the banking system. In a vicious link, thus low or absence of access to finance may lead to missed opportunities for education, starting businesses leading to poverty which itself could create barriers to access.

Providing access to formal financial services may still prove to be a transient measure as people may leave banking system due to factors such as lack of trust, bad credit records etc. Accounts opened may remain dormant or unused as people may prefer to hold cash and may not actively use banking services for their day to day transactions (Bankable Frontier Associates 2010; Platt, Singh, Bansal, Giri and Tiwari 2011). Use of technological innovations for instance mobile banking may also pose a barrier to financial inclusion due to rigid regulations on eligibility, number of documents required for client identification, entry of telecom firms (Alexandre, Mas, & Radcliffe, 2010; Bester et al., 2008; Chatain et al., 2011; De Koker, 2006; Giannetti & Jentzsch, 2013; Isern & De Koker, 2009; WSBI, 2009).

4. Measurement and Data Sources

Demirguc-Kunt et al. (2015) stated that, “Measurement is key to understanding financial inclusion and identifying opportunities to remove the barriers that may be preventing people from using financial service”. The two key questions are: how to measure financial inclusion and why does it matter. As stated earlier, financial inclusion is crucial to achieving various development and growth objectives. Greater clarity on the concept and methods of measurement could potentially contribute to benchmarking and motivating policy makers in closing the gap between those excluded and those who have access to financial services. For instance, it can help policy makers to spotlight differences between global and country level financial inclusion and assess their relative performance. It can also help the countries in tracking progress of measures to improve financial inclusion and could also assist the policymakers in understanding what groups of people are getting access to financial services. Measuring financial inclusion helps researchers in understanding who are the unbanked and the reasons why they are unbanked. World Bank also noted, “When policymakers have reliable performance indicators and survey mechanisms, they can diagnose the state of financial inclusion, agree on targets, identify barriers, craft policies and monitor and measure policy impact.”

4.1 Measurement: what has been done so far?

Several organisations have attempted to measure financial inclusion from various perspectives. For instance, the Alliance for Financial Inclusion aims at developing a common framework among its members for measuring financial inclusion. It shares lessons learned on survey methodologies, analysis, target-setting and usage of data to inform policymaking. It also promotes the adoption of the framework in a broader international context. The organisation has set up working groups on consumer empowerment and market conduct, financial inclusion strategy peer learning group, financial inclusion data, global standards, digital financial services and SME Finance.

The five standard-setting bodies BIS/Basel Committee on Banking Supervision (BCBS) that is, the Committee on Payment and Settlement Systems (CPSS), the Financial Action Task Force (FATF), the International Association of Deposit Insurers (IADI) and the International Association of Insurance Supervisors (IAIS) in coordination with the UN Secretary General’s Special Advocate for Inclusive Finance for Development are all engaged in setting standards and best practices on financial inclusion. The Banking Core Principles of BCBS have been revised to include microfinance. The CPSS focuses on large value payments and systematically important payment systems and is also involved with the issues of safe and efficient retail payment systems and instruments. Through its forum on innovative retail payments the CPSS provides guidance on proportionate regulation and supervision for such innovations. The FATF sets standards for national regimes on anti-money laundering and terrorism financing. IADI provides forum for international cooperation among deposit issuers, central banks and international organisations on issues related to financial stability, deposit insurance and resolution activities. In 2010, IADI formed Financial Inclusion and Innovation Sub-Committee to study issues related to financial inclusion. The BIS/Committee on Payments and Market Infrastructures (CPMI) considers financial inclusion in relation to various aspects of payments systems and market infrastructure.

The Global Partnership for Financial Inclusion (GPFI) launched in 2010 is a platform for all G20 and other countries and relevant stakeholders, to conduct work on financial inclusion, identify the existing data landscape, assess data gaps and develop key performance indicators. The data is derived through country led data gathering exercise from financial institutions, financial regulators and household/firm surveys.

The Organisation for Economic Cooperation and Development (OECD) and its international network of financial education (INFE) provides a policy forum for governments to network and exchange views and experiences. It has designed national strategies for financial education. It is also involved in enhancing consumer protection. In 2011 at the request of G-20, it developed along with Financial Stability Board and other relevant international organisations common principles on consumer protection in the field of financial services. OECD/INFE conducted an international survey of financial literacy and financial inclusion with the participation of 30 countries drawn from Asia, Africa covering a total of 51,650 adults aged 18 to 79 years. This was a demand side survey which identified consumer vulnerabilities and education issues and covered aspects of financial knowledge, behaviour, attitudes and inclusion and extent of financial literacy.

Several other associations and organisations are involved in promotion of financial inclusion. These include International Association for Research on Income and Wealth which promotes the furthering of research on national and economic and social accounting, and has in particular encouraged related work on financial inclusion issues. Microfinance Information Exchange (MIX), a Washington-based non-profit international organisation that collects, validates, and analyses microfinance data with the objectives of enhanced decision making and increased transparency. It has various private sector partner organisations. FinMark Trust is an independent trust set up in 2002 based in Johannesburg, South Africa with initial funding from the UK Department for International Development. Recently additional funders have come on board including UNCDF, Bill and Melinda Gates Foundation, Mastercard Foundation as well as private and public institutions at the country level. FinMark conducts FinScope surveys first introduced in 2002 and are demand and supply-side surveys conducted on consumers and small businesses. It measures and profiles access of financial products and services both formal and informal across income ranges.

Another organisation involved in financial inclusion is Center for Financial Inclusion: a New York-based group of key industry participants. Along with the key industry participants, the Centre engages through meetings, research, publications, and campaigns on financial inclusion. The Centre which initiated its activities with microfinance "works to support the transition of microfinance toward the broader spectrum of financial inclusion." It has initiated Financial Inclusion 2020, a research and advocacy project on financial inclusion.

Various donor organisations for instance, the Gates Foundation are also furthering the cause of financial inclusion. These organisations have made several efforts to improve financial inclusion. However, there are several issues in the measurement of financial inclusion and among them availability of data is one of the major ones. Table 1 summarises some of the organisations involved in promoting financial inclusion.

Table 1: Organisations involved in Financial Inclusion: A Summary

Organisations	Engagement with financial inclusion
Alliance for Financial Inclusion	Develops a common framework on financial inclusion
5 Standard setting bodies:	
BIS/Basel Committee on Banking Supervision	Principles revised to include microfinance
Committee on Payment & Settlement Systems	Provides guidance on regulation of innovations
Financial Action Task Force	Sets standards on anti-money laundering/terrorism financing
International Association of Deposit Insurers	Provides forum for cooperation among central banks
International Association of Insurance Supervisors	
Global Partnership for Financial Inclusion	Platform for G-20 and stakeholders on financial inclusion
OECD/INFE	Involved in financial literacy and consumer protection
International Association for Research on Income and Wealth	Promotes research on financial inclusion
Microfinance Information Exchange	Collects, validates and analyses data on microfinance
FinMark Trust	Conducts FinScope demand and supply surveys
Centre for Financial Inclusion	Engages through meetings, research, publications, campaigns on financial inclusion
Other organisations: Gates Foundation	Promotes low-cost digital payment systems, digital financial services, global partnerships and research and innovation

Source: Constructed by Author.

4.2 Data availability issues on measurement of financial inclusion

Although considerable emphasis is being laid on financial inclusion by the policy makers, organisations and academics on its importance for economic development, reduction of poverty and income inequality, yet lack of uniform data on the agreed indicators has been a major issue of concern (Park and Mercado 2015). When considering financial services for the poor, it is also well known that the poor depend more on the informal financial sector compared to the formal sector. However, collection of data on informal financial services at the national level is an insurmountable task, on the other hand data on formal financial sector are documented well and easier to collect. Nonetheless, by not considering informal sector it does present an incomplete picture of access of financial services to the poor. Also the quality of the data is another challenging concern. Working on improving quality and generating accurate data are key to improving the measurement of financial inclusion.

In the studies on financial inclusion often both demand as well as supply factors are considered. This also reflects how complex the concept of financial inclusion is, as a single set of factors (demand or supply) may not be able to capture in its entirety. The supply side indicators follow a top-down approach and show supply of financial services by the financial institutions. Demand side data, on other hand, follows bottom-up approach and highlights demand for financial services by the individuals, households and firms.

Both approaches, however, suffer from various problems (Tissot 2015). For instance, the supply approach is problematic as the data collected by financial institutions could be double counting on the number of accounts and any household/individual could have several accounts. Similarly, problems of sample size, sample structure affect demand approach to financial inclusion. Further, it considers actual usage of financial services and does not take into account potential demand. Within usage dimension alone several indicators could be having a formal bank account; a pre-paid card; micro insurance or inclusion through digital financial technology for instance paying bills through mobile phones. It remains unclear which of these is most important. Also it is difficult to aggregate data due to diverse nature of financial products and services (Tissot 2015). Also, at the cross-country level financial inclusion indicators could be heterogeneous as the indicators could be unique to a country's specific features. Furthermore, the data currently being collected does not reveal qualitative information on financial products and their alignment with the needs of consumers, mis-selling or high fees charged by the bank and consumer reluctance to use financial services any further (Tissot 2015). In compiling data on financial inclusion it is therefore, useful to balance both quantitative and qualitative evidence.

Also measurement of financial inclusion is highly complex as it exists both at the micro-macro levels. At macro level it is correlated to some macroeconomic variables such as GDP per capita, education, efficiency of financial system, and financial stability. At the same time the micro perspective cannot be ignored as it could include information such as type of transaction, customer or product.

4.3 Data Sources

Data sources on financial inclusion incorporate both demand and supply perspectives and have been collected through surveys which are periodical or irregular in nature resulting in data gaps for the in-between years. Data gaps also make time series analysis difficult for the academics and researchers. Demand side surveys provide data on the users (individuals, households and firms) of financial services. These provide information on met and unmet financial needs of the individuals, firms and households. Also, they inform on the barriers to using financial services and highlight socio-economic and demographic characteristics of the population.

Among demand surveys are World Bank's Global Findex or Global Financial Inclusion database. This is a comprehensive database based on the interviews with over 150,000 individuals (over 15 years of age) covering over 140 countries representing 97% of the world's population. It consists of data on around 100 indicators differentiated by gender, age and income covering use of the financial services that is, savings, borrowings, payments and managing risks. The survey carried out by Gallup Inc. uses randomly selected 15 years and above population. The first such survey was launched by the World Bank in 2011. A limitation of the database is that it is currently available only for two years 2011 and 2014.

Another major source of data on the indicators related to financial development including financial inclusion and financial stability is World Bank's Global Financial Development database (GFDD). GFDD is an annual dataset from 1960 onwards covering 203 countries. It captures data on depth, efficiency, stability and access to financial system. Although comprehensive in coverage, there are several missing values for a number of countries.

Other major demand base surveys are enterprise survey - a database based on surveys conducted by the World Bank and provides data on 130,000 private sector firms in 135 countries. The survey covers a range of topics including access to finance. However, again as in the case of above databases, there are a considerable number of missing values.

Among the occasional surveys are World Bank surveys (conducted once) on consumer protection and financial capability. It includes selected 17 countries and is a nationally representative survey of money management, planning behaviour, consumer protection awareness and usage of financial products. Another survey on selected countries conducted irregularly by the World Bank is living standards measurement survey at household level and measures access to and usage of financial services. FinScope survey also carries out surveys on selected African countries (also some other regions) covering consumer perceptions on financial services.

In addition to the above, two other surveys are Financial Inclusion Tracker Surveys and Financial Inclusion Insight Surveys. Financial inclusion tracker survey is a nationally representative panel survey commissioned by Bill and Melinda Gates Foundation in partnership with Intermedia designed to collect data on households' financial behaviour overtime. It is available only for three countries, Uganda, Pakistan and Tanzania and captures behaviour of households in the use, drivers and barriers to use of mobile financial services. These surveys were conducted annually over three year period and surveyed fixed number of households. Financial inclusion insight surveys were conceived in 2013 in partnership with Bill and Melinda Gates Foundation and Intermedia to study financial landscape of eight countries across Asia and Africa (Bangladesh, India, Indonesia, Kenya, Nigeria, Pakistan, Tanzania and Uganda). These annually nationally representative surveys intend to provide demand side insights into consumer financial behaviour. The focus is more on digital financial technologies including mobile money.

Supply side surveys provide information on regulated financial institutions and include information on geographical access, pricing and usage of financial products and services. In contrast to the demand side surveys which are irregular and mainly based on surveys, supply side data is a mix of surveys and secondary data sources mainly financial regulators and is more regular in nature. IMF's Financial Access Survey (FAS) provides annual data on financial inclusion, indicators of financial access and usage by households and nonfinancial corporations. The database contains statistics on 150 indicators for 189 countries covering geographic outreach and use of financial services. Among the indicators covered are those related to credit, deposit, availability of ATMs, loans to small and medium enterprises and also access to and use of mobile money services. The data is collected from both financial service providers such as commercial banks, microfinance institutions or other deposit taking institutions and also from the digital financial services providers such as mobile money. This database covering the years 2004-2015 on most indicators again is a useful resource, yet contains missing values for several years or is completely missing for instance, absence of any data on SMEs for two of the BRICS economies, Brazil and South Africa.

Among other databases are global payment systems survey conducted bi-annually by World Bank. This survey provides a snapshot of the payment and securities settlement systems in both advanced and emerging economies. Global Remittance Prices is another World Bank survey which provides data on cost of sending/receiving remittances. Microfinance Information Exchange (MIX) provides detailed operational and financial statistics on microfinance institutions. BankScope is another database with detailed information on 32,000 public and private banks. FinStats provides data on equities, gilts, fund prices, currencies, dividends and indices. Among other supply side statistics on financial inclusion are: IMF's International Financial Statistics (includes eight indicators of financial inclusion) and IMF Financial Soundness Indicators covering indicators of financial soundness that reflect strengths and vulnerabilities of the financial system. Table 2 summarises sources of data on financial inclusion from demand and supply perspectives.

Table 2: Different Sources of Data on Financial Inclusion

Demand Sources	Supply Sources
World Bank's Global Financial Inclusion database	IMF's Financial Access Survey
Global Financial Development Database (World Bank)	Global payment systems survey
Enterprise Surveys	Global Remittance Prices
Survey on Consumer protection & financial capability	Microfinance Information Exchange
Living standards measurement survey	BankScope
FinScope Surveys	FinStats
Financial Inclusion Tracker Surveys	IMF's International Financial Statistics
Financial Inclusion Insight Surveys	IMF Financial Soundness Indicators

Source: Constructed by Author.

4.4 Multi-dimensionality of financial inclusion

According to Martinez, Hidalgo and Tuesta (2013) financial inclusion has four components: access; use; consumer protection; and financial literacy. While access refers to outreach of financial sector accompanied with appropriate contact points between people and institutions; use refers to usage or 'purchase of one or more financial products or services', consumer protection refers to transparency and protection in financial services while financial literacy is being aware of the financial products, ability to take financial decisions, and understanding of the rights and obligations as a consumer of financial products and services.

As a single measure of financial inclusion does not exist, multiple dimensions have been proposed in the literature to capture different aspects of financial inclusion. Arora (2010) for instance, considered three dimensions in the measurement of financial access - outreach dimension: how many people does it cover- geographically and demographically (physical access or outreach dimension); how easy is it to undertake transactions (ease dimension); and how much does it cost (cost dimension). The variables covered include demographic and geographical penetration of bank branches/ATMs; ease in opening bank account, minimum amount required.

Outreach constituted an important dimension of financial inclusion for several reasons such as easy proximity to bank branch may lead to development of banking habits among the population. Greater outreach also contributes positively to reduction in poverty and increased economic development. Proximity also leads to increase in deposit and credit. As Alessandrini et al. (2005) observed “there are informational advantages that arise from physical proximity to, and personal contact with, borrowers. These improve both the selection and monitoring of borrowers and constitute a barrier limiting the entry of outside banks.” That location and proximity to bank branch is important was reaffirmed by Petersen and Rajan (2002) in their study on small and medium enterprises in US. They found that credit availability is reduced if the branch is located at a distance from the firm. Lewis (1955) too argued:

> Experience shows that the amount of saving depends partly on how widespread these facilities (i.e. savings institutions) are: if they are pushed right under the individual’s nose---people save more than if the nearest saving institution is some distance away.

Similar to outreach, the other two dimensions - ease of transactions and cost dimension are also equally important. The costs dimension may be from two perspectives: costs involved in accessing financial services and institutionally imposed costs such as high minimum loan amount; costs of transferring money internationally and ATM usage fees. The costs such as those involved in travelling to a bank branch also need to be taken into account (World Bank 2008). This could be especially important for the rural population which may face absence of adequate transport infrastructure resulting in increased time and costs incurred in travelling besides loss of day’s wages (Singhal & Duggal, 2002; Arora 2010, 2014). Data on these are however lacking and therefore any estimation of financial inclusion is only partial.

The financial inclusion indices developed by Arora (2010, 2014) for a group of 60 developed and developing countries showed that Belgium, Spain and Germany had highest levels of financial access, while countries with lowest level of financial access were Nepal, Uganda and Ethiopia. An index developed solely on outreach of the financial sector for 70 developing economies indicated Bahrain, Estonia and Croatia rank at the top, while Uganda, Tanzania and Ethiopia once again rank lowest among all the developing countries. Among the 28 developed countries, financial access (outreach) was highest in Singapore and Spain and was lowest in Slovakia and Czech Republic (Arora 2010, 2014).

Arora (2010, 2014) further conjectured that in order to obtain a holistic picture of development, financial access should be considered as one of the core indicators of development similar to the indicators like Gross Domestic Product per capita, life expectancy and adult literacy rate, all included in the Human Development Index (HDI). As the study reasoned, “higher human development without access to financial services to the population is meaningless, if people are unable to use their skills for pursuing their aspirations” (Arora 2010, 2014). The study therefore developed an economic development index which includes financial access besides other indicators of HDI. This modified index showed Belgium, Spain and Germany were at the top of the ranking if financial access is incorporated, while Nigeria, Zambia and Ethiopia continued to rank lowest as in the financial access index reflecting their low ranking in HDI and also in financial access. This reiterates the need to adopt a comprehensive and broader stance to reflect a more accurate picture of a country’s economic development.

5. Conclusion

Financial inclusion has gained considerable significance in the recent years among policy makers, multilateral organisations, researchers and academics. Several studies have noted that inclusive financial systems can lead to increase in jobs, increased incomes and reduction in poverty. It can also help in the achievement of Sustainable Development Goals. As the Global Findex database showed financial inclusion has increased considerably in the recent years for instance 62% of adult population (15 years and above) has bank account with a financial institution increasing from 51% in 2011. Yet a large population still remains unbanked. However despite increased focus, the concept and its measurement is still unclear and the concept tends to vary from the developed to developing countries.

In this study we examined various interpretations and definitions of financial inclusion. We also looked at the measurement issues and barriers to financial inclusion. Findings of the study show a competitive emergence of several charities and multilateral organisations in a crowded ‘financial inclusion marketplace’ to capture different dimensions of financial inclusion. For instance, Centre for Financial Inclusion on its website states:

> In selecting its program areas, CFI seeks out areas that have a strong fit with its vision of financial inclusion—particularly its emphasis on quality. It looks for aspects of that vision that have been under-addressed by others and where CFI may have a comparative advantage based on its industry relationships and areas of existing competence.

Moreover, there is no single uniform database on financial inclusion mainly due to the complex nature of financial inclusion and involvement of several organisations. On the multiplicity of data sources, CGap notes “Ultimately, there is no single “best source” for data on financial inclusion. To know what data you need, you must start with asking yourself what you want to know.” The data presently being compiled is also based on surveys making a time series analysis even more difficult. Our findings further show that despite considerable efforts there are several barriers to financial inclusion more so, for the vulnerable population such as elderly, disabled population and rural migrants. Women also face significant barriers in a number of countries due to economic, social and cultural factors. From the policy perspective an important aspect is that besides pursuing a supply centric approach to enhance financial inclusion, the demand barriers need to be addressed.

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